AMENDMENTS TO THE SPECIFICATION

Please amend the sub-heading beginning on page 1, before the title of the invention, as follows:

~~DESCRIPTION~~

Please amend the sub-heading beginning on page 1, line 1, as follows:

~~TECHNICAL FIELD~~

BACKGROUND OF THE INVENTION

1. Technical Field

Please amend the sub-heading beginning on page 1, line 5, as follows:

~~BACKGROUND ART~~

2. Description of Related Art

Please amend the paragraph beginning on page 5, line 19, as follows:

Accordingly, it is desirable to set clear standards for the requirement of noise countermeasures with respect to the bottom plate, and to perform noise countermeasures using the minimum required effort for the minimum required buckets among the various types of buckets, without performing noise experiments or the like. On the other hand, in cases where noise counter measures are performed on the bottom plates of buckets, there are instances in

which laminated plate cannot be attached (unlike the case of the side plate). Specifically, during the work performed by construction machinery, the bottom plate of the bucket often has occasion to strike rocks or the like; accordingly, compared to the side plate, the bottom plate is more frequently subjected to excessive external forces, so that the bottom plate is subjected to severe wear. Accordingly, there is a danger that the laminated plate attached to the bottom plate will be destroyed or separated, and is therefore deficient in durability. Furthermore, in cases where laminated plate is attached to the bottom plate, the problem of increased cost also arises.

Please amend the paragraph beginning on page 6, line 21, as follows:

Furthermore, a vibration damping device using a laminated plate in which a plurality of plates are partially coupled is known as a vibration damping device which has an effect on noise reduction in the machinery, and which is compact and superior in terms of durability. Furthermore, bolt fastening, plug welding or complete-periphery welding is used as such partial coupling (for example, see the abovementioned Japanese Patent Application Laid-Open No. 2002-48188, pages 3 through 5, and Figs. 1 through 8). In vibration damping devices using the laminated plate since the laminated plate is partially coupled to the noise generating parts (vibrating parts), very small positional deviations or gaps are generated between the vibrating parts and laminated plate and between the plates that make up the laminated plate when the noise generating parts vibrate. Since these very small positional deviations and gaps successively arise while constantly varying, ~~shocks~~ friction and impacts between the plates are repeated. Accordingly, the vibrational energy of the noise generating parts is converted into thermal energy by ~~these shocks~~ the friction and impacts, and is diffused, so that the vibration can be reduced, thus reducing the noise.

Please amend the paragraph beginning on page 8, line 19, as follows:

As a result of the abovementioned construction, noise during excavation work can be reduced by the dissipation of vibrational energy by the inner plate 151 of the laminated plate 150 as thermal energy. Furthermore, the laminated plate 150 disposed on the side surfaces of the bucket 101 prevents the entry of rain water into the interior parts of the laminated plate as a result of the all round welding, and thus prevents the occurrence of rusting between the plates, so that the vibration damping performance can be maintained. Moreover, the edge plate 104 and wear plate 108 protect these welded parts from ~~shock~~ friction or impact with rocks and the like during excavation work; accordingly, wear and damage of the welded parts of the laminated plate 150 can be prevented, so that the durability of the laminated plate 150 can be improved.

Please amend the sub-heading beginning on page 10, line 14, as follows:

~~DISCLOSURE OF THE INVENTION~~
SUMMARY OF THE INVENTION

Please amend the sub-heading beginning on page 22, line 8, as follows:

~~BEST MODE FOR CARRYING OF THE INVENTION~~
DETAILED DESCRIPTION OF THE INVENTION

Please amend the paragraph beginning on page 23, line 8, as follows:

The mechanism whereby the vibration generated in the side plate 11 is suppressed by the laminated plate 20 so that the noise emitted from side plate 11 is reduced will be described with

reference to Figs. 4A and 4B. As is shown in Fig. 4B, when the side plate 11 ~~vibrate~~ vibrates, this vibration is transmitted to the laminated plate 20, so that the thin plates 21, 21' that make up the laminated plate 20 undergo deformation. In the laminated plate 20, in which numerous thin plates 21, 21' are superimposed, the amount of deformation is different in each layer. Specifically, since the curvature radii r1 and r2 are different in adjacent thin plates 21, 21', the displacement respectively varies as $X + \Delta X2$, $X + \Delta X1$ as a result of microscopic deformation caused by vibration in the thin plates 21, 21' in which the displacement was originally x (see Fig. 4A). As a result, a relative displacement of $\Delta X2 - \Delta X1$ occurs between the thin plates 21 and 21'. The relative displacement of $\Delta X2 - \Delta X1$ causes the generation of a frictional force (hereafter referred to as the inter-layer frictional force) between the thin plates 21 and 21'. The vibrational energy that is generated in the side plate 11 is converted into thermal energy by this frictional force. As a result, the vibration that is generated in the side plate 11 is suppressed, so that the noise that is emitted from the side plate 11 is reduced.

Please amend the paragraph beginning on page 24, line 17, as follows:

In the part E of loops where the amplitude is large, as is shown in Fig. 3, the amount of deformation of the thin plates 21, 21' that make up the laminated plate 20 is large, and the inter-layer frictional force is also large. Let us assume here that the laminated plate 20 is fastened to the base material 11 in the part E constituting loops of the vibration mode 1. In this case, the independent deformation of thin plates 21, 21' that make up the laminated plate 20 is impeded, so that the inter-layer frictional force is completely eliminated or is extremely small. Consequently, a vibration damping effect created by the laminated plate 20 is not obtained, or else only an extremely slight vibration damping effect is obtained. Accordingly, in the first embodiment, the part E that constitutes a loop of the vibration mode 1 is avoided, and the laminated plate 20 is fastened to the base material 11 in ~~other~~ another part, i. e., in concrete terms, in the part G that constitutes a node of the vibration mode 1.

Please amend the paragraph beginning on page 28, line 1, as follows:

Next, a case in which the vibration generated in the bucket of a construction machine is suppressed and noise emitted from the side plate and bottom plate is reduced will be described as a second embodiment. Fig. 6 is a perspective view of the bucket 10 that is the object of vibration damping in the second embodiment, and Fig. 7 shows a sectional view of the bucket 10. As is shown in Fig. 6, numerous thin steel plates are laminated to form laminated plate 20 on the side plate 11 of the bucket 10. The ~~peripheries~~ periphery 20a of the laminated plate 20 is fastened to the side plate 11 by all round fillet welding. Furthermore, in regard to the method used to fasten the laminated plate 20 to the side plate 11, besides a method in which the plates are fastened by all round fillet welding as described above, it would also be possible to fasten the plates by an arbitrary fastening method such as intermittent fillet welding, intermittent plug welding, bolt fastening or the like.

Please amend the paragraph beginning on page 35, line 1, as follows:

The shape of the end portions on the substantially circular arc form sides of the respective inner plates 111 is a shape that substantially matches the inner circumferences of the wear plates 108, and rectangular cut-out parts 111a with a specified width of w are formed in a plurality of locations including both ends (in the circumferential direction) of the end portions on the substantially circular arc form sides. A plurality of contact parts 111b which contact the inner circumferences of the wear plates 108 are formed by being demarcated by the cut-out parts 111a. The depth of the cut-out parts 111a is equal to the gap d1 between the outer plate 112 and the wear plate ~~112~~ 108. The shape of the end portions on the substantially circular arc form sides of the outer plate 112 is a shape which is such that gaps d1 are formed as welding margins between these plates and the wear plates 108. Since the abovementioned shape is used, the laminated plate 110 is separated by the formation of gap d1 with the wear plates 108 in the cut-out parts 111a as shown in Fig. 15A. In the contact part 111b, as is shown in Fig. 15B, the inner plates

111 of the laminated plate 110 contact the wear plates 108, and the outer plate 112 are separated by the formation of gaps d1 with the wear plates 108. Specifically, the contact parts 111b protrude beyond the peripheral edges of the outer plate 112 by an amount equal to the gaps d1. The respective inner plates 111 and the outer plate 112 have shapes (substantially rectilinear shapes) which are such that gaps d2 (not shown in the figures, but similar to those shown in Fig. 31) are formed as welding margins between these plates and the edge plate 104.